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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,201	02/14/2001	Seiji Umemoto	Q63077	9861

7590 12/08/2003
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

DUONG, TAI V

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,201

Applicant(s)

UMEMOTO ET AL.

Examiner

Tai Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al in view of Kuroda.

Lu et al disclose in Fig. 1 a LCD device similar to that of the instant claims comprising a visual side substrate 30 having a transparent electrode 36, a reflection cholesteric liquid crystal layer 38, a color-imparting layer 18 on a backside transparent resin substrate 12 having a transparent electrode 20 (col. 3, line 26 – col. 4, line 31). Thus, the only difference between the LCD device of Lu and that of the instant is a colored resin substrate being used in place of the color-imparting layer 18 and the transparent resin substrate 12. Kuroda discloses in Figs. 1 and 4 that it was known to employ a transparent substrate 2 with a light absorbing layer 5 or a colored resin substrate 12 having light absorbing function (col. 3, lines 10-22; col. 4, line 1 – col. 6, line 40; col. 7, lines 1-3). Thus, it would have been obvious to a person of ordinary skill in the art in view of Kuroda to employ a colored resin substrate, instead of the color imparting layer and the substrate, in Lu's device for reducing the thickness, the weight and the manufacturing cost of the LCD device (fewer elements as compared to the case of the color imparting layer and the substrate). As to claim 4, Lu et al disclose that it was known to employ a black layer for a high contrast ratio (col. 1, lines 40-42). Thus, it would be obvious to a person of ordinary skill in

the art to employ a black colored substrate in the LCD cited in the above rejection for obtaining high contrast ratios.


Claim 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al and Kuroda as applied to claim 2 above, and further in view of Fukuchi et al.

Fukuchi et disclose that it was known to employ a resin substrate not being thicker than 1 mm and having a glass transition of not lower than 90 °C for providing sufficient heat resistance during the required working process (col. 2, lines 49-59; col. 10, lines 23-30). Thus, it would have been obvious to a person of ordinary skill in the art in view of Fukuchi to select a resin substrate not being thicker than 1 mm as the colored resin substrate cited in the above rejection of claim 2 for obtaining a substrate with good mechanical characteristics and lightweight. Also, it would have been obvious to a person of ordinary skill in the art to select a resin substrate having a glass transition temperature not lower than the temperatures of the different steps of the process as the colored resin substrate cited in the above rejection of claim 2 for preventing damages to the resin substrate.

Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication should be directed to Tai Duong at telephone number 703 308-4873.

T.D.
TVD


TOANTON
PRIMARY EXAMINER

12/03